Spring 2013 Course Plan

Operations Analysis & Quality Improvement
(32.512)

UMass Lowell Inn and Conference Center
50 Warren Street
Lowell, MA  01852

Parking and Location:
The UML Inn and Conference Center is located in the center of Lowell, not far from either North or South Campuses. There are a limited number of free parking spaces located directly in front of the Inn. If you cannot find a parking space in front of the Inn, the Lower Locks Parking Garage is located immediately to the Inn’s left. Access to the garage is on Warren Street. You will need to take a parking ticket when you enter the garage, but it will be validated by the guard inside the Inn’s lobby. For directions to the UML Inn and Conference Center, please follow the link below:

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603-490-3236

This course teaches a multi-disciplinary approach to operations analysis, process redesign and quality improvement in health care. We focus on the tools and processes used for improving work performance and patient safety in a variety of health care organizations.

Course Objective
Students learn the following:

- The history, development and principles of quality improvement in health care;
- How quality improvement processes have been used in various health care settings;
The tools and processes used in quality improvement;
How to structure and implement a quality improvement program; and
How to collect, analyze and interpret quality improvement data.

Textbooks

Three textbooks are required and necessary:


Teaching Approach

The course is taught on a “blended” basis, with both face-to-face and “synchronous” online classes. For each class you will be responsible for:

- **Textbook Reading Assignment.** For each class, you will be reading chapters from one or more of the three textbooks.

- **Other Reading Assignment.** For each class, you will also have one more additional reading assignments. These readings will be available as PDF or Word documents from Blackboard.

The reading assignments are not optional. You will get so much more out of the course if you prepare adequately for our time together. I encourage you to read assignments three times, preferably at different sittings. First, read the assignment quickly to get an overall perspective on what is covered and how the information is organized. Second, read the assignment slowly and carefully for comprehension. Third, quickly read the assignment once more, and highlight key points.

Face-to-Face Classes

The class meets six times on Wednesday evenings from 5:30 to 8:30 PM. You have reading assignments for every class, including the first.
• **Tools Reading Assignment.** Chapter 5 (about 400 pages long) in *The Quality Toolbox* provides an almost encyclopedic compendium of quality improvement tools. As seen on pages 8-12 of *The Quality Toolbox*, the author groups these tools into six categories according to how they are used. For each class, after the first one, you will review the tools included in one of five categories. Since each category includes a great many tools, you should focus on tools that you think most useful or important. During each class, selected students may be asked to report on one of the tools in that week’s category.

• **Team Exercise.** After the first face-to-face class, we will use or apply *The Quality Toolbox* tools to address a known health care “quality” problem. Depending upon class size, two or more students will develop a team exercise and direct/facilitate the team exercise in class. The “Team Leaders” will take responsibility for structuring the problem, sharing background materials as appropriate (in advance) and then leading the team exercise. Whatever problem the team chooses, it must involve information and experience that everyone shares, so that all students can contribute to the exercise. For each team exercise, another team will be designated as “Reporters.” The Reporters will take notes and prepare a memorandum summarizing the exercise and findings; and this memorandum will be distributed to all students prior to the subsequent face-to-face class meeting.

The face-to-face classes will be recorded if possible, and the recordings will be available from the class web site. If you are not able to attend a class, you must listen to the recording on your own schedule and prepare a one-page report reflecting upon what was discussed during the class and what you learned. If the class was not recorded, please write up a one page response to the readings for that week.

**Wimba (online) Classes**

The class meets eight times on Wednesday evenings from 7:30 to 9:00 PM. You will have reading assignments for each Wimba class as indicated on the Wimba Class Calendar.

• **Written Responses.** Prior to each Wimba class, you are asked to answer discussion question(s) in writing and post your response to Blackboard, the course’s web site. Your postings will be available for review and comment by the entire class. It is expected that all students will read their fellow students’ responses prior to that week’s Wimba Class. By utilizing this approach to learning your comprehension of and perspective on quality issues, methods and improvements will be greatly enhanced.
• Individual Wimba Presentation on Quality Improvement. After the first Wimba class, each student will make a 15 minute special presentation by sharing information on relevant quality improvement resources or experiences. This presentation could focus on any of the following: (1) a quality-related website (e.g., www.ihi.org, www.jointcommission.org, www.ahrq.gov), (2) a process improvement or quality project in which you have participated OR one that you have researched, (3) a quality-related book.

The online classes will be conducted using Wimba Live Classroom, an Internet-based communications facility accessed through the course’s web site. To use Wimba Live Classroom, you will need a computer microphone and head set. Due to feedback problems, the use of desktop speakers is not allowed. (Inexpensive headsets are available and it really does improve the quality of the audio if all participate in this.) If you are accessing the audio via phone, please mute your phone.

If you are not available to participate in a Wimba class, you must listen to the archived recording on your own schedule and prepare a one-page report reflecting upon what was discussed during the class and what you learned. The archived class recordings will be available on Blackboard.

Grading: Grades will be calculated using the following point system:

- 30 points - Class Participation
- 20 points - Team Exercise
- 40 points - Discussion Board Postings
- 10 points - Individual presentation

If you miss more than one Face-to-Face class, your grade for the entire course will be reduced. ANY student class absence must be pre-approved to be considered an excused absence.

Each discussion board posting will be graded on a 5 point scale. “Extra credit” will be available to anyone providing unusually expansive and well-researched answers to the discussion question. All postings are due at midnight on the due date listed in the course plan. Unless pre-approved, you will be penalized for late submittals.
Final grades will be assigned as follows:

<table>
<thead>
<tr>
<th>Grade</th>
<th>GPA Equivalent</th>
<th>Numeric Range</th>
<th>Grade</th>
<th>GPA Equivalent</th>
<th>Numeric Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>A+</td>
<td>4.0</td>
<td>&gt;100</td>
<td>B-</td>
<td>2.7</td>
<td>80-82</td>
</tr>
<tr>
<td>A</td>
<td>4.0</td>
<td>93-100</td>
<td>C+</td>
<td>2.3</td>
<td>77-79</td>
</tr>
<tr>
<td>A-</td>
<td>3.7</td>
<td>90-92</td>
<td>C</td>
<td>2.0</td>
<td>73-76</td>
</tr>
<tr>
<td>B+</td>
<td>3.3</td>
<td>87-89</td>
<td>C-</td>
<td>1.7</td>
<td>70-72</td>
</tr>
<tr>
<td>B</td>
<td>3.0</td>
<td>83-86</td>
<td>F</td>
<td>0.0</td>
<td>&gt;60</td>
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</tbody>
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**Plagiarism** (whether from published sources, unpublished sources or the Internet) is absolutely not allowed in preparation of written assignments. A first offense will mean a letter reduction in your grade for the entire course; a second offense will result in your failing the course. It is incumbent on you (the student) to learn and understand what is meant by plagiarism and act accordingly. I encourage you to read [http://en.wikipedia.org/wiki/Plagiarism](http://en.wikipedia.org/wiki/Plagiarism). No extenuating circumstances will be allowed, and no second chances will be given. If I find that so much as a single sentence is copied without attribution (even if a word or two is changed), the above sanctions will be appl
# Face-to-Face Class Calendar

<table>
<thead>
<tr>
<th>Class Date</th>
<th>Textbook Reading Assignments</th>
<th>Other Reading Assignments</th>
<th>Tools Reading Assignment</th>
</tr>
</thead>
</table>
| January 23  | QT: Chapters 1, 2 and 3      | A Founder of Quality Assessment Encounters a Troubled System Firsthand  
The Phantom Menace of Sleep-Deprived Doctors | QT: Project Planning & Implementing Tools |
| February 6  | CHC: Chapters 1, 2 and 3     | The Quality of Health Care Delivered to Adults Scorecard Reveals Wide Disparities in Care Across the Country  
CHC: Resource B | QT: Idea Creation Tools |
| February 27 | CHC: Chapters 4 and 5  
BP: Chapter 11 | IHI’s Collaborative Model | QT: Idea Creation Tools |
| March 27    | CHC: Chapters 6 and 7       | A Framework for Spread  
The Science of Spread: How Innovations in Care Become the Norm  
The Hot Spotters | QT: Process Analysis Tools |
| April 10    | CHC: Chapters 8 and 9       | Implementing Quality as a Core Organizational Strategy  
The Checklist | QT: Cause Analysis Tools |
| May 1       | CHC: Resource C             | Five Years After *To Err Is Human: What Have We Learned?*  
The Bell Curve | QT: Evaluation & Decision-Making Tools |

QT: Quality Toolbox  
CHC: Curing Health Care  
BP: The Best Practice
## Wimba Class Calendar

<table>
<thead>
<tr>
<th>Class Date</th>
<th>Reading Assignments</th>
<th>Discussion Question</th>
<th>Assignment Due Date</th>
</tr>
</thead>
</table>
| January 30 | BP: Introduction, Chapters 1, 2 and 3  
Who caused this tragic medication mistake? | What did you learn? | January 27 |
| February 13 | BP: Chapters 4 and 5 | What did you learn? | February 10 |
| February 20 | BP: Chapters 6, 7 and 8 | What did you learn? | February 17 |
| March 6 | BP: Chapters 9 and 10 | What did you learn? | March 3 |
| March 20 | Going Lean in Health Care  
Is Health Care Ready for Six Sigma Quality? | Report on the experience of a healthcare provider that has embraced a significant quality improvement program. | March 17 |
| April 3 | The Best Care Anywhere | Answer any or all of the following questions: (1) Why or how did the VHA accomplish such a turnaround? (2) Is VHA’s experience replicable elsewhere in the civilian healthcare system? (3) What has been reported more recently relative to VHA quality and quality initiatives? (4) Do we have other similarly positive and encouraging quality stories in other healthcare organizations, either here or abroad? | April 1 |
| April 17 | Escape Fire | What does this report mean to you? | April 14 |
| April 24 | The Cost Conundrum | What is the importance of this article? | April 21 |

QT: Quality Toolbox  
CHC: Curing Health Care  
BP: The Best Practice